

Safety Data Sheet

Date of Revise: 2018/12/28

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity PUFF DINO PEEABLE METAL PROTECTION FILM – COLORLESS
Alternate Names DTM4B.DTM10A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name PUFFDINO TRADE CO., LTD.
No.25, Gongyequ 23rd Rd, Nantun Dist, Taichung City 40850, Taiwan
Telephone +886-4-23503555
Fax +886-4-23501867

1.4. Emergency telephone number

Emergency phone # +886-4-23503555

Section 2. Hazard identification of the product

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. aerosol 1 H222 Extremely flammable aerosol;
H229 Pressurized container: may burst if heated
Gases under pressure H280 Contains gas under pressure; may explode if heated
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

2.2. Label elements

According to Regulation (EC) No 1272/2008



Danger

H222 Extremely flammable aerosol
H229 Pressurized container: may burst if heated
H280 Contains gas under pressure; may explode if heated
H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness and dizziness.

Precautionary Statements - Prevention:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P211 Do not spray on an open flame or other ignition source.

P233 Keep container tightly closed.

P251 Pressurized container: Do not pierce or burn, even after use.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

Precautionary Statements - Response:

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P321 Specific treatment (see information on this label).

P332+313 If skin irritation occurs: Get medical advice / attention.

P337+313 If eye irritation persists: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

Precautionary Statements - Storage:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+403 Protect from sunlight. Store in a well-ventilated place.

P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F

Precautionary Statements - Disposal:

P501 Dispose of contents / container in accordance with local / national regulations.

See Technical Data Sheet.

2.3. Other hazards

This product contains no PBT/vPvB chemicals.

May displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

3.2. Mixtures

If the product contains substances that present a hazard according to Regulation (EC) No. 1272/2008 [CLP/GHS] (as amended by (EU) 2015/830), they are listed below.

Ingredient/Chemical Designations	Weight %	EC No. 1272/2008 Classification*
Dimethyl ether CAS Number: 115-10-6 EC No. 204-065-8 Index No.: 603-019-00-8	25 - 50	Flam. Gas 1;H220
Butanone	10 - 25	Flam. Liq. 2;H225

CAS Number: 78-93-3 EC No. 201-159-0 Index No.: 606-002-00-3		Eye Irrit. 2;H319 STOT SE 3;H336
Synthetic Resin CAS Number: 9005-09-8 EC No. -- Index No.: --	10 - 25	Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT SE 3;H335
2-Methoxy-1-Methylethyl Acetate CAS Number: 108-65-6 EC No. 203-603-9 Index No.: 607-195-00-7	5 - 10	Flam. Liq. 3;H226
N-Butyl Acetate CAS Number: 123-86-4 EC No. 204-658-1 Index No.: 607-025-00-1	5 - 10	Flam. Liq. 3;H226 STOT SE 3;H336

*The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

4.1. Description of first aid measures

- General** In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
- Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention.
Give nothing by mouth.
- Eye** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
- Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
- Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Overview** No specific symptom data available.
Treat symptomatically. See section 2 for further details.

4.3. Indication of any immediate medical attention and special treatment needed

- Notes to physician** Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Do not use: water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Carbon Dioxide, Carbon Monoxide
Keep away from heat / sparks / open flames / hot surfaces - No smoking.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from firefighting to enter drains or water ways.

Put on appropriate personal protective equipment (see section 8).

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Small Spill: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spill: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for late disposal.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials: Strong oxidizing agents

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No available information

Section 8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
115-10-6	Dimethyl ether	OSHA	No Established Limit
		ACGIH	TWA: 1000 ppm
		NIOSH	No Established Limit
78-93-3	Butanone	OSHA	TWA 200 ppm (590 mg/m ³)
		ACGIH	TWA: 50 ppm STEL: 100 ppm

		NIOSH	TWA 200 ppm (590 mg/m ³) ST 300 ppm (885 mg/m ³)
9005-09-8	Synthetic Resin	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
108-65-6	2-Methoxy-1-Methylethyl Acetate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
123-86-4	N-Butyl Acetate	OSHA	TWA 150 ppm (710 mg/m ³)
		ACGIH	TWA: 20 ppm
		NIOSH	TWA 150 ppm (710 mg/m ³) ST 200 ppm (950 mg/m ³)

8.2. Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses recommended
Skin	Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Protective gloves recommended.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Blue Liquid
Odor	No available information
Odor threshold	40 ppm
pH	No available information
Melting point / freezing point	No available information
Initial boiling point and boiling range	-48~-1°C
Flash Point	No available information
Evaporation rate (Ether = 1)	No available information
Flammability (solid, gas)	Gas
Upper/lower flammability or explosive limits	Lower Explosive Limit: 2.5% Upper Explosive Limit: 8.4%
Vapor pressure (Pa)	5.0~6.0 atm (25°C)
Vapor Density (Air=1)	1.6~1.8
Relative density	0.88~0.92
Solubility in Water	insoluble
Partition coefficient n-octanol/water (Log Kow)	No available information

Auto-ignition temperature	287°C
Decomposition temperature	No available information
Viscosity (cSt)	No available information

9.2. Other information

No other relevant information.

Section 10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No available information

10.4. Conditions to avoid

Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Thermal decomposition can give off carbon monoxide (CO) and carbon dioxide(CO₂).

Section 11. Toxicological information

11.1. Information on toxicological effects

Product

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

	Classification	Hazard Description
Acute toxicity (oral)	--	Not Applicable
Acute toxicity (dermal)	--	Not Applicable
Acute toxicity (inhalation)	--	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	--	Not Applicable
Skin sensitization	--	Not Applicable
Germ cell mutagenicity	--	Not Applicable
Carcinogenicity	--	Not Applicable
Reproductive toxicity	--	Not Applicable
STOT-single exposure	3	May cause drowsiness or dizziness.
STOT-repeated exposure	--	Not Applicable
Aspiration hazard	--	Not Applicable

Components

Acute toxicity

Component	Oral LD50,	Skin LD50,	Inhalation	Inhalation	Inhalation
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	mg/kg	mg/kg	Vapor LC50, mg/L/4hr	Dust/Mist LC50, mg/L/4hr	Gas LC50, ppm
Dimethyl ether – (115-10-6)	No data available	No data available	308.00, Rat - Category: NA	No data available	No data available
Butanone - (78-93-3)	2,054.00, Rat - Category: 5	6,480.00, Rabbit - Category: NA	32.00, Mouse - Category: NA	No data available	No data available
Synthetic Resin – (9005-09-8)	No data available	No data available	No data available	No data available	No data available
2-Methoxy-1-Methyl ethyl Acetate -(108-65-6)	5,155.00, Rat - Category: NA	>2,000.00, Rabbit - Category: 5	No data available	No data available	No data available
N-Butyl Acetate - (123-86-4)	10,760.00, Rat - Category: NA	17,600.00, Rabbit - Category: NA	No data available	No data available	No data available

Carcinogen Data

CAS No.	Component	Source	Value
115-10-6	Dimethyl ether	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
78-93-3	Butanone	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
9005-09-8	Synthetic Resin	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
108-65-6	2-Methoxy-1-Methyl ethyl Acetate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
123-86-4	N-Butyl Acetate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Section 12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Component	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L	3hr IC50 Bacteria, mg/L
Dimethyl ether – (115-10-6)	1,783.04, Fish	755.549, Daphnia sp	154.917 (96 hr), Algae	Not Available
Butanone - (78-93-3)	2,993.00, Pimephales promelas	308.00, Daphnia magna	2,029.00 (96 hr), Pseudokirchnerella subcapitata	Not Available
Synthetic Resin – (9005-09-8)	Not Available	Not Available	Not Available	Not Available
2-Methoxy-1-Methy lethyl Acetate -(108-65-6)	161.00, Pimephales promelas	501.00, Daphnia magna	>1,000.00 (96 hr), Pseudokirchnerella subcapitata	Not Available
N-Butyl Acetate - (123-86-4)	18.00, Pimephales promelas	44.00, Daphnia sp	246.00 (72 hr), Pseudokirchnerella subcapitata	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

No available information

12.4. Mobility in soil

No available information

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No available information

Section 13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

Section 14. Transport information

	ADR/RID (Land transport)	IMDG (Sea Transportation)	ICAO-TI/IATA-DGR (Air transport)	ADN (Inland waterway transport)
14.1. UN number	1950	1950	1950	Not Applicable
14.2. UN proper shipping name	Aerosols, flammable (each not exceeding 1 L capacity)	Aerosols, flammable (each not exceeding 1 L capacity)	Aerosols, flammable (each not exceeding 1 L capacity)	Not Applicable
14.3. Transport hazard	2.1	2.1 Sub Class: Not Applicable	2.1	Not Applicable

class(es)				
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards	Not Applicable	Marine Pollutant: No	Not Applicable	Not Applicable

14.6. Special precautions for user

No further information

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

Section 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Legislation

REGULATION (EU) 2015/830 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

US federal regulations

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA): All components of this material are either listed or exempt from listing on the TSCA Inventory.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA (311/312) REPORTABLE GHS HAZARD CLASSES: Flammable (gases, aerosols, liquids, or solids), Gas under Pressure, Simple Asphyxiant

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

National Legislation

None noted.

Taiwan (R.O.C) Legislation

Occupational Safety and Health Act, Toxic Chemical Substance Control Act, Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace, Regulations for the Labeling and Hazard Communication of Hazardous Chemicals, Regulations Governing Designating and Handling of Priority Management Chemicals, Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste, Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations.

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

Section 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H220 Extremely flammable gas

H225 Highly flammable liquid and vapor.

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

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